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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/327,563 06/08/99 SVENDSEN

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EXAMINER
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SLOBODYANSKY, E	
ART UNIT	PAPER NUMBER

1652  
DATE MAILED:

*16*

05/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
09/327,563

Applicant(s)  
Svensen et al.

Examiner  
Elizabeth Slobodyansky

Group Art Unit  
1652



☒ Responsive to communication(s) filed on Feb 26, 2001

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 77-81, 84-88, 90-93, 97, 113-187, and 192-213 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☒ Claim(s) 77-81, 84-88, 90-92, 97, 121-125, and 192 is/are allowed.

☒ Claim(s) 93, 113-120, 126-187, and 193-213 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 12

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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### **DETAILED ACTION**

The amendment filed February 26, 2001 amending the specification to insert references to the sequence identifiers, replacing the Sequence Listing with the complete one and amending claims 77-81, 84-88, 90-93, 97, 113, 118-121, 126-128, 133-136, 141-158, 163-166, 171-187, 193 and 213 has been entered.

Claims 77-81, 84-88, 90-93, 97, 113-187 and 192-213 are pending.

Rejections and/or objections not reiterated from previous Office action are hereby withdrawn.

The text of those sections of Title 35 U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

Claims 93, 113, 118, 119, 126-128, 133, 134, 141, 142, 158, 163-165, 171, 172, 186, 193, 200 and 207 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims encompass mutations in positions corresponding to *Bacillus licheniformis*  $\alpha$ -amylase (SEQ ID NO:2) residues G433, M15, N188, M197 and/or K436.

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The Examiner is unable to locate adequate support in the specification for such mutations. This rejection is explained in the Office action mailed August 25, 2000.

Claims 193-213 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 193-213 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an  $\alpha$ -amylase having at least one mutation listed in claim 193, does not reasonably provide enablement for any variant of an  $\alpha$ -amylase comprising said mutations that does not have structural limitations. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

These rejections are explained in the Office action mailed August 25, 2000.

Claims 193-213 are directed to a genus of a variant of  $\alpha$ -amylase having substitutions in positions corresponding to specific residues in *Bacillus licheniformis*  $\alpha$ -amylase (SEQ ID NO:2). Claims have been amended to recite "wherein said variant has alpha-amylase activity". While such limitation describes function, the structural

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limitations on an enzyme having alpha-amylase activity are not present and claims read on any structure having said activity. Therefore, structurally unrelated proteins are encompassed within the scope of these claims, including partial amino acid sequences. Amending claims to recite "... wherein the difference between said variant and said parent [comprises] consists of a different amino acid residue ...", for example would obviate the 112, 1st paragraph, rejections.

***Claim Rejections - 35 USC § 102***

Claims 128-162, 166-170 and 173-187 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al.

This rejection is explained in the Office action mailed August 25, 2000.

***Allowable Subject Matter***

Claims 77-81, 84-88, 90-92, 97, 121-125 and 192 are allowed.

***Response to Arguments***

Applicant's arguments filed February 26, 2001 have been fully considered but they are not persuasive.

Applicants argue that support for mutations at F 403, G433, M15, N188, M197 and/or K436 in SEQ ID NO:2 can be found on pages 39 and 40 (page 25). The

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examiner agrees with that only regarding F403 which is an endpoint of a disclosed range. G433 and K436 are not found within the disclosed fragments. All other positions are within a disclosed range. However, nowhere in the specification there is an indication that a specific residue now claimed is particularly important within a disclosed genus (range).

Applicants argue that "Suzuki et al. only disclose the homology of the wild-type(parent) proteins" (page 28). This is not persuasive because "a variant" is not necessarily a man produced mutant.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Slobodyansky whose telephone number is (703) 306-3222. The examiner can normally be reached Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ponnathapura Achutamurthy, can be reached at (703) 308-3804. The FAX phone number for Technology Center 1600 is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Center receptionist whose telephone number is (703) 308-0196.



Elizabeth Slobodyansky, PhD  
Primary Examiner

May 17, 2001